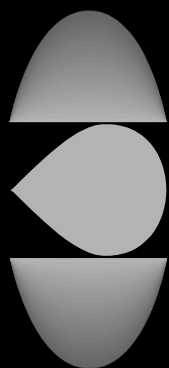




# **RISK MANAGEMENT PROGRAM GUIDANCE FOR PROPANE USERS AND SMALL RETAILERS (40 CFR PART 68)**



**RMP SERIES**

This document provides guidance to owners and operators of stationary sources to determine if their processes are subject to regulation under section 112(r) of the Clean Air Act and 40 CFR part 68 and to comply with regulations. This document does not substitute for EPA's regulations, nor is it a regulation itself. Thus, it cannot impose legally binding requirements on EPA, states, or the regulated community, and may not apply to a particular situation based upon circumstances. This guidance does not represent final agency action, and EPA may change it in the future, as appropriate.

# INTRODUCTION

This guidance is intended for propane users and small retailers who have a single small or medium capacity tank of propane or several small tanks stored in the same area. Larger distribution facilities and bulk storage terminals may need to consult a separate document that provides more detail and covers larger capacity tanks.

If you have more than 10,000 pounds of propane stored in a single vessel or in a group of vessels (tanks, cylinders) that are connected or stored close together, you must comply with the Chemical Accident Prevention rule issued by the U.S. Environmental Protection Agency (EPA) under the Clean Air Act. The rule is codified as part 68 of Title 40 of the Code of Federal Regulations (CFR). The goal of this rule is to prevent accidental releases that could affect the public or the environment. If you are subject to part 68, you must be in compliance no later than June 21, 1999, or the date on which you first have more than a threshold quantity of a regulated substance in a process, whichever is later.

For most propane users and distributors, complying with this rule will be easy because most of the requirements are similar to those you already comply with under state or local rules based on the National Fire Protection Association (NFPA) standard number 58 on propane. If you are complying with NFPA-58 and implementing other safe engineering practices for propane, you should have little more to do for this rule besides filing a brief report with EPA.

## AM I COVERED?

The capacity of propane tanks is usually given as water capacity (this information should be on the nameplate of the tank). Table 1 translates the water capacity (in gallons) into propane weight (in pounds). Read the tank capacity on the nameplate and check this table. For any tanks whose capacity is above the grey line in Table 1, you will need multiple vessels to meet the threshold.

**TABLE 1**  
**TANK CAPACITY IN POUNDS**

<b>Tank Capacity (Gallons of water)</b>	<b>Propane (pounds)</b>
500	1,800
1,000	3,700
1,500	5,500
2,000	7,400
2,700	10,000
12,000	44,000
18,000	67,000
30,000	110,000

Table 1 assumes that tanks are filled to 88 percent of capacity, the maximum level allowable under NFPA-58 at 60°F. If you always keep your tanks filled to a lower level, you should adjust these numbers to reflect your lower inventory. Also, add up the amounts of propane in tanks that are connected or close together. If you have six 500-gallon tanks or three 1,000-gallon tanks, you are subject to the rule if the tanks are connected by piping, or if you store the tanks close enough together that they could be involved in a single accident. For example, if a fire could spread to all the tanks, they are considered one “process” and the propane in all the tanks must be counted toward the 10,000-pound threshold. You should also consider whether, if one tank exploded, the other tanks could be affected by the shrapnel or fire.

Most propane users will have a single “process.” If you have several groups of propane tanks, widely separated, you may be considered to have multiple processes (see Appendix A for additional guidance on determining whether your propane tanks are separated far enough to be considered multiple processes.) In this case, you should consult the *Risk Management Program Guidance for Propane Storage Facilities* or the *General Guidance for Risk Management Programs*. You can obtain these from the Emergency Planning and Community Right-to-Know Act (EPCRA) hotline at (800) 424-9346 (for DC area (703) 412-9810; T.D. (800) 553-7672) or electronically at <http://www.epa.gov/ceppo/>.

## WHAT DO I HAVE TO DO?

The first step you should take after determining that you are covered by the rule is to decide which Program level you are in. EPA developed the rule with three Program levels to reflect different levels of risk and levels of effort needed to prevent accidents.

- ◆ **Program 1** is a minimal set of requirements for processes that have a very low risk of affecting the public in the event of an accident. A process is eligible for Program 1 if it, (a) has no public receptors (e.g., houses, schools, or businesses) within the distance that a 1 psi overpressure will reach as a result of an explosion caused by a worst-case release, and, (b) has not had an accident that caused deaths or injuries offsite or required response or restoration activities at environmental receptors (e.g., national or state parks, federal wilderness areas) within the last five years.
- ◆ **Program 2** is a streamlined set of requirements for processes not eligible for Program 1 or subject to Program 3.
- ◆ **Program 3** applies to processes that are not eligible for Program 1 and that are either subject to the Process Safety Management (PSM) Standard of the Occupational Safety and Health Administration (OSHA) or in certain industrial sectors (some chemical manufacturers, all refineries, and all pulp mills).

This document does not provide guidance on Program 3. If you are subject to the OSHA PSM standard, you should see EPA’s *General Guidance for Risk Management Programs*.

Most propane users will be either eligible for Program 1 or subject to Program 2.

## PROGRAM 1

### ELIGIBILITY

Many propane users will be eligible for Program 1, particularly those on farms or those that are a considerable distance from any other business or residence. For a process to be eligible for Program 1, it must meet the following criteria:

- ◆ The process must not have had an accidental release of propane that led to deaths or injuries of people offsite or response or restoration activities at environmental receptors in the last five years. Environmental receptors are limited to national or state parks, forests, or monuments; officially designated wildlife sanctuaries, preserves, refuges, or areas; and Federal wilderness areas; and,
- ◆ There are no public receptors within a distance to a 1 psi overpressure from a worst-case release.

A worst-case release is defined by the rule as the loss of the contents of the single largest vessel (or piping) containing the regulated substance. For propane and other flammable substances, the released substance is assumed to explode and generate a pressure wave that can damage people or structures. The rule requires you to determine the distance to a 1 psi overpressure (at 1 psi, windows will break). This scenario is required by the regulation, and you must adopt this scenario. Table 2 provides the worst-case distance to a 1 psi overpressure for propane tanks.

**TABLE 2**  
**DISTANCE TO A 1 PSI OVERPRESSURE**

<b>Nominal Water Capacity (gallons)</b>	<b>Distance to 1 psi Overpressure (miles)</b>
500 - 1,750	0.1
1,751 - 7,000	0.2
7,001 - 23,000	0.3
23,001 - 51,000	0.4

Next, you must determine if there are “public receptors” within a circle whose radius is equal to this distance. Public receptors include “offsite residences, institutions (e.g., schools and hospitals), industrial, commercial, and office buildings, parks, or recreational areas inhabited or occupied by the public at any time without restriction by the stationary source where members of the public could be exposed to toxic concentrations, radiant heat, or overpressure, as a result of an accidental release.” Offsite means areas beyond your property boundary and "areas within the property boundary to which the public has routine and unrestricted access during or outside business hours." Public roads are not public receptors.

If there are no public receptors within the distance to a 1 psi overpressure for your largest vessel and the process has not had an accidental release that caused any of the listed offsite impacts, your process is eligible for Program 1. If you have questions about whether certain areas are considered public receptors, call the Emergency Planning and Community Right-to-Know Act (EPCRA) hotline at (800) 424-9346 (for DC area (703) 412-9810; T.D. (800) 553-7672) or check EPA's *General Guidance for Risk Management Programs* (available from the hotline or electronically at <http://www.epa.gov/ceppo/>).

## WHAT MUST I DO FOR A PROGRAM 1 PROCESS?

Because your worst-case release would not affect public receptors, you only need to do two things:

- ◆ Coordinate emergency response with your local fire department and any other local emergency planning and response agencies; and,
- ◆ Complete a brief Risk Management Plan (RMP), as described below.

Coordination with the fire department may consist of a discussion with them or a walk-through of your facility. The purpose is simply to be sure that the fire department is aware of the hazards associated with propane at your facility and ready to respond if an accident occurs. Also, contact your State Emergency Response Commission (SERC) to identify your Local Emergency Planning Committee (LEPC). You can get contact information for your SERC from the EPCRA hotline (noted above).

The RMP will be filed with EPA and made available to state and local agencies and the public. EPA has developed an electronic submission system that will make filing the RMP easy. To submit your RMP electronically, you will need to download free software, called RMP\*Submit, from EPA's internet website at <http://www.epa.gov/ceppo>. RMP\*Submit will be available in early 1999. The software will provide you with all the necessary instructions to complete your RMP. You submit the completed electronic RMP to EPA by copying it onto a 3½-inch diskette and mailing the diskette to EPA. If you do not have access to a computer to load the software on to, you may file a paper version. The necessary submission forms for the paper version will be available in early 1999 from the hotline mentioned above or EPA's internet website at <http://www.epa.gov/ceppo>.

The RMP includes a brief executive summary describing the facility; registration information (basic facility information); the worst-case release scenario; a five-year accident history (covering any accidents that caused deaths, injuries, or significant property damage on site, known offsite deaths or injuries, offsite property or environmental damage, or evacuations or shelterings in place); information on emergency response activities; and a certification statement.

The executive summary should be a brief description of the facility, the worst-case release scenario, steps you take to prevent accidents (for example, complying with state and local laws), emergency response information (for example, your coordination with the fire department), and any steps you are planning to take to improve safety (for example, upgrading equipment to meet newer editions of NFPA-58). The rest of the RMP is filling in names, addresses, and numbers, and checking appropriate boxes. You do not need to submit supporting documentation; you need only keep it onsite for inspection. Most propane users will not have any accidents to report on the five-year accident history. If you do not, you need not complete that section. A sample RMP for a small Program 1 propane user is attached.

## PROGRAM 2

If your process is not eligible for Program 1 and not subject to Program 3, the process is in Program 2. Most propane users that are in commercial or industrial areas or close to residential areas will be subject to Program 2.

### WHAT MUST I DO FOR PROGRAM 2?

For Program 2, you must:

- ◆ Analyze both a worst-case release scenario and an alternative release scenario;
- ◆ Implement a prevention program;
- ◆ Implement an emergency response program if your employees will respond to a release; and
- ◆ File an RMP.

### WHAT ARE THE RELEASE SCENARIOS?

**Worst Case Scenario.** Part 68 defines the worst-case release scenario you must analyze. It is described in the previous section of this guidance (regarding Program 1). You can simply use Table 2 to define the distance to the 1 psi endpoint for your largest tank.

**Alternative Release Scenario.** An alternative release scenario is a scenario that is more likely to happen. It must reach an endpoint offsite unless no such scenario exists. One of the following scenarios may be appropriate for you.

- ◆ **Pull-Away Explosion.** An alternative scenario may be a hose rupture caused by a pull-away. A pull-away can occur if the driver fails to remove the hoses between the storage tank and the transfer vehicle before moving the vehicle. In this scenario, the failure involves a 25 foot length of unloading hose, 4" in diameter. The active mitigation devices are assumed to work as designed, limiting the release to the contents of the hose. The release leads to a vapor cloud explosion (endpoint 1 psi). The quantity released is 69 pounds. The distance to the endpoint is 175 feet (report as 0.03 miles).
- ◆ **Piping Break.** Another alternative scenario you may want to consider is a break in propane piping leading to a 10-minute release and explosion. The distance to the 1 psi endpoint is shown in Table 3.

**TABLE 3  
DISTANCES TO 1 PSI FOR PIPE RELEASES**

Pipe Size (inches)	Quantity Released (pounds)	Distance to 1 psi
0.5	4,738	0.1
1	18,951	0.2
2	75,804	0.3

Other scenarios are described in EPA's *Risk Management Program Guidance for Propane Storage Facilities*.

You must estimate in the RMP residential populations within the circles defined by the endpoints for your worst-case and alternative release scenarios (i.e., the center of the circle is the point of release and the radius is the distance to the endpoint). You may use Census data and round to two significant digits (e.g., 1147 becomes 1100, and 123 becomes 120). You do not need to conduct surveys or correct Census data. In addition, you must report in the RMP whether certain types of public receptors (e.g., schools, hospitals) and environmental receptors are within the circle. You do not need to identify specific receptors; you simply need to check off the category.

## WHAT DO I HAVE TO DO FOR THE PREVENTION PROGRAM?

The Program 2 prevention program has seven elements:

- ◆ Safety information
- ◆ Hazard review
- ◆ Operating procedures
- ◆ Training
- ◆ Maintenance
- ◆ Compliance audits
- ◆ Incident investigation

If you are complying with NFPA-58 or state or local laws based on it, following the guidelines in the National Propane Gas Association (NPGA) LP Gas Safety Handbook, and implementing NPGA safety bulletins, you are probably already doing almost everything you need to do to comply with these requirements. The following sections provide additional information on how your current practices will help you comply with the EPA rule.

**Safety Information.** You must have up-to-date information on propane and your propane equipment. You must have a Material Safety Data Sheet (MSDS) on propane. If you do not have one, contact your supplier for a copy. You must also document your maximum intended inventory for your propane equipment. This will generally be the capacity of your tank or tanks; see Table 1.

You need information on safe upper and lower temperatures, pressures, flows, and compositions. The following information should meet this requirement:

- ◆ Propane is a gas at normal temperatures and pressures. It is liquefied by storing it in a closed container at pressures higher than its equilibrium vapor pressure. There is a direct relationship between ambient temperature and the pressure inside the storage container. As the ambient temperature increases, the pressure of the container increases proportionately. According to NFPA 58, 1998 Edition, Table B-1.2.1, commercial propane when heated to a temperature of 105°F will produce a pressure of 210 pounds per square inch, gauge (psig). NFPA 58, 1998 Edition, Table 2-2.2.2 sets the current minimum design pressure for an ASME tank at 250 pounds per square inch, absolute (psia). This design allows for a maximum vapor pressure of 215 psia at 100°F. The discharge piping for pumps and compressors is currently designed to 350 psi and vapor piping is designed for 250 psi according to NFPA 58, 1998 Edition, 3-2.10.2. The minimum temperatures are determined by the steel used in the design of the storage tank and the piping. Liquid propane



(if released at atmospheric pressure) can refrigerate steel pipes and tanks down to temperatures of -44°F.

- ◆ Another property of propane in its liquid form is its ability to greatly expand when heated. Therefore, NFPA 58, 1998 Edition sets the maximum filling capacity of large tanks in Table 4-4.2.2(b) to avoid overfilling.

You must maintain equipment specifications for all equipment that is part of a covered process, including your bulk storage tank(s), piping, pressure relief valves, hydrostatic relief valves, emergency shutoff valves, temperature, pressure and level gauges, valves, pumps, compressors, and hoses. Specifications for your bulk propane storage tank(s) are provided on the nameplate attached to the tank. If you do not have the information, obtain it from your vendor and keep all such information on file.

You must document the codes and standards you used to design and build your propane facility and that you follow to operate it. These codes will probably include the electrical and building codes that you must comply with under state or local laws. Your equipment vendors will be able to provide you with information on the codes they comply with for their products.

The equipment specifications and lists of standards and codes will probably ensure that your process is designed in compliance with recognized and generally good engineering practices.

**Hazard Review.** You are required to conduct a hazard review to identify the hazards associated with your equipment and propane, the possible malfunctions of equipment or human errors that could cause a release, the safeguards needed to control hazards or prevent malfunctions or errors, and any steps needed to detect or monitor releases. If you are required to comply with NFPA-58, your review can focus on whether you are in compliance with that standard. You may need to consider external events as well as internal failures. If you are in an area subject to earthquakes, hurricanes, or floods, you should examine whether your system would survive these natural events without releasing propane. You should consider the potential impacts of lightning strikes and power failures. If your equipment could be hit by vehicles, you should examine the consequences of that. If you have anything near the process that could burn, ask yourself what would happen if the fire affected the propane tanks or equipment. EPA's *Risk Management Program Guidance for Propane Storage Facilities* contains a checklist you may use to conduct the review.

When you complete the review, you must document the results and ensure and document that any problems are addressed in a timely manner.

**Operating Procedures.** Written operating procedures describe the tasks you or your operators must perform, safe process operating parameters that must be maintained, and safety precautions for operations and maintenance activities. These procedures tell you or your employees how to work safely every day. Applicable portions of the National Propane Gas Association (NPGA) Certified Employee Training Program and compliance with certain NPGA Safety Bulletins can be used to meet this requirement. Other programs may be available that will also be acceptable.

**Training.** You must ensure that any employee presently operating a process and any employee newly assigned to a covered process have been trained or tested competent in the Operating Procedures that pertain to their duties. For those employees already operating a process on June 21, 1999, you may certify in writing that the employee has the required knowledge, skills, and abilities to safely carry out the duties

and responsibilities as provided in the operating procedures. You are not required to provide a specific amount or type of training. You should develop a training approach that works for you. You must provide refresher training. You must determine the frequency of refresher training in consultation with any affected employees, but you must provide refresher training at least once every three years.

The NPGA's Certified Employee Training Program and any training you do to meet DOT requirements may satisfy this requirement.

**Maintenance.** You must prepare and implement procedures to maintain the on-going mechanical integrity of your propane equipment. You may use procedures or instructions provided by equipment vendors or procedures in Federal or state regulations or industry codes as the basis for maintenance procedures. You must also train maintenance workers in these procedures (if a contractor maintains your equipment, the contractor's employees should be trained as well). NPGA's Certified Employee Training Program covers many of the maintenance procedures for your propane equipment.

You must establish a schedule for inspecting and testing equipment associated with your propane storage facility. You may obtain recommendations from manufacturers, vendors, or trade associations. You should, however, use your own experience as a basis for examining any schedules you obtain from others. Many things may affect whether a schedule is appropriate. The manufacturer may assume a constant rate of use. If your actual rate of use (e.g., the amount of propane pumped per hour) varies considerably, the variations may cause additional wear on the equipment. Extreme weather conditions may also increase wear on equipment.

If you have workers that use your propane facility, talk with them as you prepare or adopt these procedures and schedules. If their experience indicates that equipment fails more frequently than the manufacturer expects, you should adjust the inspection schedule to reflect that experience.

EPA's *Risk Management Program Guidance for Propane Storage Facilities* includes a maintenance checklist that you may find useful.

**Compliance Audits.** At least every three years, you must certify that you have evaluated compliance with EPA's requirements for the prevention program for each covered process. At least one person who conducts the audit must be knowledgeable about the process. You must develop a report of the audit's findings, determine and document an appropriate response to each finding, and document that you have corrected all deficiencies. You must retain compliance audit reports for 5 years.

**Incident Investigation.** You must investigate each incident that resulted in, or could have resulted in, a "catastrophic" release of propane. A catastrophic release is one that presents an imminent and substantial endangerment to public health and the environment. You must start the investigation no later than 48 hours after the accident. You must create a report on the accident that includes, at least, the date of the accident and the date the investigation began, a description of the accident, the factors that contributed to the accident, and any recommendations that resulted from the investigation. You must address the recommendations and share the findings with any employees whose jobs are affected by the findings. Investigation reports must be retained for five years.

The NPGA "LP-Gas Safety Handbook," and NPGA bulletin #202-93 "After Accident Procedure" may help you comply with this requirement.

Table 4 summarizes the Program 2 prevention program elements and ways that propane facilities can easily comply with these requirements.

**TABLE 4**  
**WAYS TO COMPLY WITH PROGRAM 2 PREVENTION ELEMENTS**

<b>Program 2 Prevention Element</b>	<b>How a Propane Facility Can Meet This Requirement</b>
Safety Information	<ul style="list-style-type: none"> <li>- Maintain Material Safety Data Sheets on propane</li> <li>- Use the information provided in this guidance</li> <li>- Document NFPA-58 information</li> <li>- Maintain propane equipment vendor-supplied information</li> <li>- Maintain records on electrical and building codes followed</li> </ul>
Hazard Review	<ul style="list-style-type: none"> <li>- Use checklist in EPA's Risk Management Program Guidance for Propane Storage Facilities</li> <li>- Review compliance with NFPA-58</li> </ul>
Operating Procedures	<ul style="list-style-type: none"> <li>- Implement NPGA Certified Employee Training Program</li> <li>- Comply with NFPA-58</li> <li>- Comply with NPGA safety bulletins</li> <li>- Use written operating procedures for propane systems</li> </ul>
Training	<ul style="list-style-type: none"> <li>- Implement NPGA Certified Employee Training Program.</li> <li>- Document training done to meet DOT requirements</li> <li>- Document training done to comply with NFPA-58</li> <li>- Comply with NPGA Safety Bulletins</li> <li>- Provide refresher training at least every three years</li> </ul>
Maintenance	<ul style="list-style-type: none"> <li>- Implement NPGA Certified Employee Training Program</li> <li>- Use checklist in EPA's Risk Management Program Guidance for Propane Storage Facilities</li> <li>- Establish a maintenance and testing schedule</li> <li>- Document inspections and maintenance done by equipment vendors</li> </ul>
Compliance Audits	<ul style="list-style-type: none"> <li>- Conduct and document a compliance audit every three years; respond to each finding, and document that you have corrected any deficiencies.</li> </ul>
Incident Investigation	<ul style="list-style-type: none"> <li>- Implement practices in NPGA's LP-Gas Safety Handbook</li> <li>- Implement NPGA bulletin #202-93 "After Accident Procedure"</li> </ul>

## WHAT DO I HAVE TO DO FOR THE EMERGENCY RESPONSE PROGRAM?

If you have at least one Program 2 process at your facility, you may be required to implement an emergency response program, consisting of an emergency response plan, emergency response equipment procedures, employee training, and procedures to ensure the program is up-to-date. This requirement applies if your employees will respond to some releases involving propane. The emergency response section of EPA's rule allows you to decide first whether the employees will respond to an accidental release of propane and then what involvement the employees will have in the event of a release of propane. If you choose not to have employees respond, then you must coordinate response actions with the local fire department and have in place appropriate mechanisms to notify emergency responders when there is a need for a response.

Most propane users will probably rely on local responders to handle any accident. If you plan to have your employees respond to a propane release, you should consult EPA's *General Guidance for Risk Management Programs* to determine what you need to do to develop and implement an emergency response program.

## WHAT DO I HAVE TO DO FOR MY RMP?

The RMP for a Program 2 process will include the same sections covered in the Program 1 process, plus a report on the alternative release scenario and the report on the prevention program. Except for the executive summary, the RMP consists of names, numbers, and check-off boxes. If you have more than one process, you still file only one RMP. If you have multiple Program 2 processes, but they all contain propane, you report only one worst-case scenario and one alternative scenario to cover all of them. (If you have multiple Program 1 processes, you must report a worst-case scenario for each Program 1 process in order to establish that the process is eligible for Program 1.)

If you have one Program 2 process, your RMP will include:

- ◆ The executive summary (covering the alternative release scenario as well as worst-case)
- ◆ Registration data
- ◆ Worst-case and alternative release data
- ◆ Five-year accident history (only if you've had any accidents to report)
- ◆ Prevention program data
- ◆ Emergency response data
- ◆ The certification

A sample RMP and certification statement for a small Program 2 propane user is attached.

## SAMPLE RMP for PROGRAM 1 PROPANE USER

*(This sample RMP is for a fictitious facility named, "Smith Farms Poultry Company."  
Any resemblance to any actual facility is accidental).*

### CERTIFICATION STATEMENT

Based on the criteria in 40 CFR 68.10, the distance to the specified endpoint for the worst-case accidental release scenario for the following processes is less than the distance to the nearest public receptor:

- Hatchery house heating system

Within the past five years, the process has had no accidental release that caused offsite impacts provided in the risk management program rule (40 CFR 68.10(b)(1)). No additional measures are necessary to prevent offsite impacts from accidental releases. In the event of fire, explosion, or a release of a regulated substance from the process, entry within the distance to the specified endpoint may pose a danger to public emergency responders. Therefore, public emergency responders should not enter this area except as arranged with the emergency contact indicated in the RMP. The undersigned certifies that, to the best of my knowledge, information, and belief, formed after reasonable inquiry, the information submitted is true, accurate, and complete.

William R. Smith  
Signature

William R. Smith  
Print Name

Company Owner  
Title

6/21/99  
Date

### EXECUTIVE SUMMARY

***The accidental release prevention and emergency response policies at your facility:*** This facility complies with NFPA-58 requirements for LP-Gas storage, and it is our policy to adhere to all applicable federal, state, and local laws. If an emergency were to occur, it is our policy to notify the Garvin County Fire Department and request that they respond to the emergency.

***A description of your facility and the regulated substances handled.*** This facility is a poultry farm. We use propane on the farm for winter heating fuel for our hatchery houses. The heating system consists of two 1,500-gallon propane tanks and associated piping, valves, burners, and other miscellaneous equipment.

***The worst-case release scenario.*** Our worst-case scenario is failure of one 1,500-gallon storage tank when filled to the greatest amount allowed (88% at 60F), resulting in a vapor cloud explosion. Since this facility is located in a relatively remote, unoccupied area, the worst-case scenario would not affect anyone beyond our property.

***The general accidental release prevention program and chemical-specific prevention steps.*** This facility complies with EPA's accident prevention rule and all applicable state and local codes and regulations. The propane system is designed, installed, and maintained in accordance with NFPA-58 and state law.

***Five-year accident history.*** We have never had an accident involving propane that caused deaths, injuries, property or environmental damage, evacuations, or shelterings in place.

***The emergency response program.*** In the event of an emergency involving our propane system, it is our policy to notify the Garvin County Fire Department and request that they respond to the emergency. We have discussed this policy with the fire department; members of the fire department have inspected our propane system.

***Planned changes to improve safety.*** None.

**1. REGISTRATION****1.1 Source Identification**1.1.a. Facility Name: **Smith Farms Poultry Company**

1.1.b. Parent Company #1 Name: N/A

1.1.c. Parent Company #2 Name:

**1.2. RMP Facility Identifier: [EPA will assign]****1.3. EPA Identifier:****1.4. Dun and Bradstreet Numbers (DUNS) N/A**

1.4.a. Facility DUNS:

1.4.b. Parent Company #1 DUNS:

1.4.c. Parent Company #2 DUNS:

**1.5 Facility Location Address**a. Street **42 Rural Rt 7**

b. Street - Line 2:

c. City: **Plainville** d. State: **OK** e. Zip Code: **12345** f. County: **Garvin**g. Facility Latitude (degrees, minutes, and seconds): **34 40 20**h. Facility Longitude (degrees, minutes, and seconds): **-097 21 06**i. Method for determining Lat/Long : **I1 (interpolation, map)**j. Description of location identified by Lat/Long : **AB Administrative Building****1.6 Owner/Operator**a. Name: **William R. Smith**b. Phone: **(555) 555-5555**

Mailing Address:

c. Street 1: **42 Rural Rt 7**e. City: **Plainville** f. State: **OK** g. Zip: **12345****1.7. Name and title of person responsible for RMP (part 68) implementation**a. Name: **William R. Smith**b. Title: **Company owner**

## 1.8. Emergency Contact

- a. Name: **William R. Smith**
- b. Title: **Company owner**
- c. Phone: **(555) 555-5555**
- d. 24-hour phone: **(555) 555-1111** e. Ext. or PIN:

## 1.9. Other Points of Contact (Optional)

- a. Facility or parent company e-mail address:
- b. Facility public contact phone: **(555) 555-5555**
- c. Facility or parent company www homepage address:

1.10. LEPC (Optional): **Garvin County LEPC**1.11. Number of full-time employees (FTEs) On Site: **4**

## 1.12. Covered by (select all that apply)

- a. OSHA PSM:
- b. EPCRA section 302:
- c. CAA Title V Air Operating Permit ID:

1.13. OSHA Star or Merit Ranking: **No**1.14. Last Safety Inspection Date: **12/07/97**1.15. Last Safety Inspection Performed by (select one) **Fire department**1.16. Will this RMP involve Predictive Filing? **No**

1.17. Process Specific Information. For each covered process fill in the following chart. Use a separate sheet for each process

Process Number: (optional to help you track)	<b>1</b>		
Process Description: (optional to help you track)	<b>Hatchery House Heating System</b>		
a. Program Level:	<b>1</b>		
b. NAICS Code(s):	<b>11234 Poultry hatcheries</b>		
c. Chemical	c.1. Name:	c.2. CAS Number:	c.3. Quantity (lbs.):
	<b>Propane</b>	<b>74-98-6</b>	<b>11,000</b>

**4. FLAMMABLES: WORST CASE**

4.1. Chemical Name **Propane**

4.2. Results based on (select one)

c. EPA's *RMP Guidance for Propane Storage Facilities* Reference Tables or Equations

4.3. Scenario: **Vapor Cloud Explosion**

4.4. Quantity released (lbs.) **5,500 pounds**

4.5. Endpoint Used: **1 psi**

4.6. Distance to endpoint (miles) **0.10 miles**

4.7. Residential population within distance to endpoint **0**

4.8. Public receptors within distance to endpoint (select all that apply)

- |               |                                     |
|---------------|-------------------------------------|
| a. Schools    | d. Prisons /Correctional facilities |
| b. Residences | e. Recreation areas                 |
| c. Hospitals  | f. Commercial/industrial areas      |

4.9. Environmental receptors within distance to endpoint (select all that apply)

- a. National or state parks, forests, or monuments
- b. Officially designated wildlife sanctuaries, preserves, or refuges
- c. Federal wilderness area

4.10. Passive mitigation considered (select all that apply)

- a. Dikes
- b. Fire walls
- c. Blast walls
- d. Enclosures
- e. Other (specify)

4.11. Graphics file name (Optional)



**9. EMERGENCY RESPONSE**

## 9.1. Emergency response (ER) plan

a. Is facility included in the written community emergency response plan? **No**

b. Does facility have its own written emergency response plan? **No**

9.2. Does facility ER plan include specific actions to be taken in response to accidental releases of regulated substance(s)?

9.3. Does facility ER plan include procedures for informing public and local agencies responding to accidental release?

9.4. Does facility ER plan include information on emergency health care?

9.5. Date of most recent review/update of facility ER plan

9.6. Date of most recent emergency response training for facility's employees

9.7. Local agency with which the facility ER plan or response activities are coordinated

a. Name of agency **Garvin County Fire Department**

b. Phone number **(555) 555-1000**

9.8. Subject to (select all that apply)

9.8.a. OSHA 1910.38 ✓

9.8.b. OSHA 1910.120

9.8.c. Clean Water Act/SPCC

9.8.d. RCRA

9.8.e. OPA-90

9.8.f. State EPCRA rules/law

9.8.g. Other (specify)

## SAMPLE RMP for PROGRAM 2 PROPANE USER

*(This sample RMP is for a fictitious facility named "Jones Nursery."  
Any resemblance to any actual facility is accidental).*

### CERTIFICATION STATEMENT

To the best of the undersigned's knowledge, information, and belief formed after reasonable inquiry, the information submitted is true, accurate, and complete.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Date

### EXECUTIVE SUMMARY

***The accidental release prevention and emergency response policies at your facility:*** This facility complies with NFPA-58 requirements for LP-Gas storage, and it is our policy to adhere to all applicable federal, state, and local laws. If an emergency were to occur, it is our policy to notify the Howard County Fire Department and request that they respond to the emergency.

***A description of your facility and the regulated substances handled.*** This facility is a nursery. We grow trees, flowers, and other products for sale to the public. We use propane for winter heating fuel for our greenhouses. The heating system consists of two 1,500-gallon propane tanks and associated piping, valves, burners, and other miscellaneous equipment.

***The worst-case and alternative release scenarios.*** Our worst-case scenario is failure of one 1,500-gallon storage tank when filled to the greatest amount allowed (88% at 60F), resulting in a vapor cloud explosion. The resulting distance to the endpoint extends offsite, and public receptors are within the distance to the endpoint. Our alternative release scenario is a break in a 0.5-inch diameter pipe, leading to a 10-minute release and explosion. The resulting distance to the endpoint extends offsite, and public receptors are within the distance to the endpoint.

***The general accidental release prevention program and chemical-specific prevention steps.*** This facility complies with EPA's accident prevention rule and all applicable state and local codes and regulations. The propane system is designed, installed, and maintained in accordance with NFPA-58 and state law.

***Five-year accident history.*** We have never had an accident involving propane that caused deaths, injuries, property or environmental damage, evacuations, or shelterings in place.

***The emergency response program.*** In the event of an emergency involving our propane system, it is our policy to notify the Howard County Fire Department and request that they respond to the emergency. We have discussed this policy with the fire department; members of the fire department have inspected our propane system.

***Planned changes to improve safety.*** None.

## 1. REGISTRATION

### 1.1 Source Identification

- a. Facility Name: **Jones Nursery**
- b. Parent Company #1 Name: N/A
- c. Parent Company #2 Name:

### 1.2. RMP Facility Identifier: [EPA will assign]

### 1.3. EPA Identifier:

### 1.4. Dun and Bradstreet Numbers (DUNS) N/A

- a. Facility DUNS:
- b. Parent Company #1 DUNS:
- c. Parent Company #2 DUNS:

### 1.5 Facility Location Address

- a. Street **238 Main Street**
- b. Street - Line 2:
- c. City: **Odenton**      d. State: **MD**      e. Zip Code: **21873**      f. County: **Howard**
- g. Facility Latitude (degrees, minutes, and seconds): **39 11 15**
- h. Facility Longitude (degrees, minutes, and seconds): **-076 50 10**
- i. Method for determining Lat/Long : **I1 (interpolation, map)**
- j. Description of location identified by Lat/Long : **AB Administrative Building**

### 1.6 Owner/Operator

- a. Name: **Mary L. Jones**
- b. Phone: **(410) 777-1234**

### Mailing Address:

- c. Street 1: **238 Main St.**
- e. City: **Odenton**      f. State: **MD**      g. Zip: **21873**

### 1.7. Name and title of person responsible for RMP (part 68) implementation

- a. **Mary L. Jones**
- b. **Company Owner**

## 1.8. Emergency Contact

- a. Name: **Mary L. Jones**
- b. Title: **Company owner**
- c. Phone: **(410) 777-1234**
- d. 24-hour phone: **(410) 777-4321** e. Ext. or PIN:

## 1.9. Other Points of Contact (Optional)

- a. Facility or parent company e-mail address:
- b. Facility public contact phone: **(410) 777-1234**
- c. Facility or parent company www homepage address:

1.10. LEPC (Optional): **Howard County LEPC**1.11. Number of full-time employees (FTEs) On Site: **4**

## 1.12. Covered by (select all that apply)

- a. OSHA PSM:
- b. EPCRA section 302:
- c. CAA Title V Air Operating Permit ID:

1.13. OSHA Star or Merit Ranking: **No**1.14. Last Safety Inspection Date: **10/19/98**1.15. Last Safety Inspection Performed by (select one) **Fire department**1.16. Will this RMP involve Predictive Filing? **No**

1.17. Process Specific Information. For each covered process fill in the following chart. Use a separate sheet for each process.

Process Number: (optional to help you track)	<b>1</b>		
Process Description: (optional to help you track)	<b>Greenhouse Heating System</b>		
a. Program Level:	<b>2</b>		
b. NAICS Code(s):	<b>11142 Nursery and floriculture production</b>		
c. Chemical	c.1. Name:	c.2. CAS Number:	c.3. Quantity (lbs.):
	<b>Propane</b>	<b>74-98-6</b>	<b>11,000</b>

**4. FLAMMABLES: WORST CASE**

4.1. Chemical Name **Propane**

4.2. Results based on (select one)

c. EPA's *RMP Guidance for Propane Storage Facilities* Reference Tables or Equations

4.3. Scenario: **Vapor Cloud Explosion**

4.4. Quantity released (lbs.) **5,500 pounds**

4.5. Endpoint Used: **1 psi**

4.6. Distance to endpoint (miles) **0.10 miles**

4.7. Residential population within distance to endpoint **14**

4.8. Public receptors within distance to endpoint (select all that apply)

a. Schools d. Prisons /Correctional facilities

b. Residences ☒ e. Recreation areas

c. Hospitals f. Commercial/industrial areas

4.9. Environmental receptors within distance to endpoint (select all that apply)

a. National or state parks, forests, or monuments

b. Officially designated wildlife sanctuaries, preserves, or refuges

c. Federal wilderness area

4.10. Passive mitigation considered (select all that apply)

a. Dikes

b. Fire walls

c. Blast walls

d. Enclosures

e. Other (specify)

4.11. Graphics file name (Optional)

**5. FLAMMABLES: ALTERNATIVE RELEASES** [Program 2 processes only]

5.1. Chemical Name        **Propane**

5.2. Results based on: **EPA's RMP Guidance for Propane Storage Facilities Reference Tables or Equations**

5.3. Scenario        **Vapor cloud explosion**

5.4. Quantity released (lbs.)        **4,738**

5.5. Endpoint used (select one)   **1 psi**

5.6. Distance to endpoint (miles)   **0.10**

5.7. Residential population within distance to endpoint        **14**

5.8. Public receptors within distance to endpoint (select all that apply)

- |                    |                                     |
|--------------------|-------------------------------------|
| a. Schools         | d. Prisons /Correctional facilities |
| b. Residences    ✓ | e. Recreation areas                 |
| c. Hospitals       | f. Commercial/industrial areas      |

5.9. Environmental receptors within distance to endpoint

- a. National or state parks, forests, or monuments
- b. Officially designated wildlife sanctuaries, preserves, or refuges
- c. Federal wilderness area

5.10. Passive mitigation considered (select all that apply)

- a. Dikes
- b. Fire walls
- c. Blast walls
- d. Enclosures
- e. Other (specify)

5.11. Active mitigation considered (select all that apply)

- a. Sprinkler system
- b. Deluge system
- c. Water curtain
- d. Excess flow valve
- e. Other (specify)

5.12. Graphics file name (Optional)

**8. PREVENTION PROGRAM - PROGRAM 2**

For each process or process unit:

8.1. NAICS Code for process: **11142**

8.2. Chemical name(s):	<b>Propane</b>
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## 8.3. Safety information

a. Date of most recent review/revision of safety information **02/04/97**

b. Federal/state regulations or industry-specific design codes and standards used to demonstrate compliance with the safety information requirement (select at least one)

NFPA 58 (or state law based on NFPA 58) ✓

ASME Standards ✓

OSHA (29 CFR 1910.111)

None

ASTM Standards

ANSI Standards

Other (specify)

Comments

## 8.4. Hazard review

a. Date of completion of most recent hazard review/update **02/04/98**b. Expected date of completion of any changes resulting from the hazard review **02/04/98**

c. Major hazards identified (select at least one)

Toxic release

Overpressurization ✓

Earthquake

Fire ✓

Corrosion

Floods

Explosion ✓

Overfilling ✓

Tornado

Runaway reaction

Contamination

Hurricanes

Polymerization

Equipment Failure ✓

Other

Loss of cooling, heating, electricity, instrument air

8.4.d. Process controls in use (select at least one)

Vents

Emergency air supply

Relief valves ✓

Emergency power

Check valves

Backup pump

Scrubbers

Grounding equipment

Flares		Inhibitor addition
Manual shutoffs	✓	Rupture disks
Automatic shutoffs		Excess flow device
Interlocks		Quench system
Alarms and procedures	✓	Purge system
Keyed bypass		Other

## 8.4.e. Mitigation systems (select all that apply)

Sprinkler system	✓	Deluge system
Dikes		Water curtain
Fire walls		Enclosure
Blast walls		Neutralization
		Other (specify)

## 8.4.f. Monitoring/detection systems (select all that apply)

Process area detectors	Other (specify)
Perimeter monitors	

## 8.4.g. Changes since last PHA update (select all that apply)

Reduction in chemical inventory	Installation of perimeter monitoring systems
Increase in chemical inventory	Installation of mitigation systems
Change in process parameters	None required/recommended
Installation of process controls	Other (specify)
Installation of process detection systems	

8.5. Date of most recent review/revision of operating procedures **03/01/97**

## 8.6. Training

a. Date of most recent review/revision of training programs **03/01/97**

## b. Type of training provided (select at least one)

Classroom	On the job	✓
Other (specify)		

## c. Type of competency test used (select at least one)

Written test	Observation	✓
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Oral test

Other (specify)

Demonstration ✓

## 8.7. Maintenance

- a. Date of most recent review/revision of maintenance procedures **04/01/97**
- b. Date of most recent equipment inspection/test **10/19/98**
- c. What equipment inspected/tested **Propane tanks, valves, and piping**

## 8.8. Compliance audits

- a. Date of most recent compliance audit
- b. Expected date of completion of any changes resulting from the compliance audit

## 8.9. Incident investigation:

- a. Date of most recent incident investigation
- b. Expected date of completion of any changes resulting from the investigation

8.10. Date of most recent change that triggered review/revision of safety information, hazard review, operating or maintenance procedures or training

**9. EMERGENCY RESPONSE**

## 9.1. Emergency response (ER) plan

a. Is facility included in the written community emergency response plan? **No**

b. Does facility have its own written emergency response plan? **No**

9.2. Does facility ER plan include specific actions to be taken in response to accidental releases of regulated substance(s)?

9.3. Does facility ER plan include procedures for informing public and local agencies responding to accidental release?

9.4. Does facility ER plan include information on emergency health care?

9.5. Date of most recent review/update of facility ER plan

9.6. Date of most recent emergency response training for facility's employees

9.7. Local agency with which the facility ER plan or response activities are coordinated

a. Name of agency **Howard County Fire Department**

b. Phone number **(410) 123-4567**

9.8. Subject to (select all that apply)

9.8.a. OSHA 1910.38 ✓

9.8.b. OSHA 1910.120

9.8.c. Clean Water Act/SPCC

9.8.d. RCRA

9.8.e. OPA-90

9.8.f. State EPCRA rules/law

9.8.g. Other (specify)